

REMARKS

Reconsideration and allowance of the subject application in view of the foregoing amendments and the following remarks is respectfully requested. This Amendment should be entered under Rule 116 because it places this application in condition for allowance, and because this Amendments further clarifies arguments that were presented in previous Office Action and amendments.

Claims 1-15 remain pending in the application.

Claims 1-9 and 11-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Nilsson (U.S. Patent 5,177,764, hereinafter "Nilsson"). In response, claim 1 has been amended to incorporate further limitations and is now patentable over Nilsson for the reasons discussed below.

In the last Office Action, it is stated that Applicants have not explicitly recited in claim 1 the two counter-propagation modes have to occur at the same time. The Examiner interpreted that the two counter-propagation modes propagate one at a time in opposite directions. In response, claim 1 has been amended to explicitly define that the two counter-propagation modes occur at the same time. Applicants respectfully submit that the gyrolaser of the present invention, which counter-propagates in two opposite directions at the same time, is completely different from the unidirectional oscillation disclosed by Nilsson.

As described in the Background section of the Specification of the present application, the gyrolaser is based on the **Sagnac** effect, which includes a frequency difference $\Delta\nu$ between the two optical transmission modes that propagate in opposite directions, called counterpropagating modes, of a bidirectional laser ring cavity undergoing a rotational motion. The value of $\Delta\nu$ measured by spectral analysis of the beat of the two emitted beams is used to determine the value of Ω very accurately. It is impossible to have a beam with two counter-propagation modes propagating one at a time in opposite direction. In a gyrolaser, the two modes must propagate simultaneously and this feature is not described by Nilsson.

Nilsson discloses a unidirectional ring laser, in which, a biasing influence is used to cause the laser to oscillate in only one of the two possible directions of propagation around the ring. As described in one of the embodiments of Nilsson, an external laser pump source 114 emits a radiation 115 to the monolithic resonator 100, the radiation 115 transmit through resonator 100 and couple out the unidirectional ring laser radiation 116 from the resonator 100. (column 14, lines 35-45 and FIG. 1) Apparently, only one laser beam propagates around the

ring at a time, as disclosed by Nilsson. Thus, Nilsson fails to disclose all of the claimed limitations of claim 1, in particular, the cavity and the amplifying medium being such that two counterpropagating optical modes can propagate in opposite directions at the same time one with respect to the other inside the optical cavity.

Based on the above reasons, claim 1 is not anticipated by Nilsson and the rejection of claim 1 should be withdrawal.

Claims 2-9 and 11-14 recite additional, important limitations and should be patentable for the reasons discussed above with respect to claim 1 as well as on their own merits. Accordingly, the rejection of claims 2-9 and 11-14 should be withdrawn.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nilsson (U.S. Patent No. 5,177,764) in view of Aronowitz (U.S. Patent No. 3,867,034). Applicants respectfully traverse this rejection.

Claim 10 is dependent on claim 1 and recites additional, important limitations. Claim 10 should be patentable for the reasons discussed above with respect to claim 1 as well as on its own merits. Accordingly, the rejection of claim 10 should be withdrawn.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nilsson (U.S. Patent No. 5,177,764) in view of Brasseur et al (U.S. Patent No. 6,731,423). Applicants respectfully traverse this rejection.

Claim 15 is dependent on claim 1 and recites additional, important limitations. Claim 15 should be patentable for the reasons discussed above with respect to claim 1 as well as on its own merits. Accordingly, the rejection of claim 15 should be withdrawn.

All objections and rejections having been addressed, it is respectfully submitted that the application is in condition for allowance and a Notice to that effect is earnestly solicited.

The Examiner is invited to telephone the undersigned, Applicant's attorney of record, to facilitate advancement of the present application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

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A handwritten signature in cursive script, reading "Kenneth M. Berner".

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